Bristol CONNECTICUT All Heart ™

**Department of Public Works | 860.584.6125**

# MEMORANDUM

DATE: March 11, 2020

TO: Mayor Ellen Zoppo-Sassu
Board of Public Works

FROM: Raymond A. Rogozinski, P.E., Director of Public Works

RE: Installation of Photovoltaic Solar Array – DPW Landfill
Request for qualifications 2P20-037

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As indicated in the attached correspondence, the City received eight proposals containing firm qualifications to install solar arrays on the flat/unused portion of the City's closed landfill. The firms of Davis Hill Development, EcoSolar, Verogy and CTEC Solar were selected for interviews as part of the selection process.

The selection panel consisted of Michael Dumas, DPW Commissioner, Roger Rousseau, Purchasing Director and myself. Based on a review of the submitted proposals and interviews the panel recommends the following Board of Public Works action:

**Recommend City Council authorize the Mayor or Acting Mayor to sign any and all documents associated with designating CTEC Solar, LLC. as the preferred developer to install photovoltaic solar panels on the City's Lake Avenue landfill in accordance with Request for Qualifications 2P20-037.**

Please note that the preferred solar developer (CTEC Solar) will be investigation/pursuing the use of both Virtual Net Metering and Shared Clean Energy Facilities (SCEF). Although only one of the two options will ultimately be selected the most beneficial option to the City is a function of available credits/incentives, permitting and will require investigation by the preferred solar developer. Once CTEC Solar completes its findings it is anticipated that the City will issue a Letter of Intent to proceed with the project.

Please feel free to contact me with any question or concerns at 860-584-6113.

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# MEMORANDUM

To: Raymond Rogozinski
From: Roger D. Rousseau, Purchasing Agent
Date: March 9, 2020

**Re: 2P20-037 Installation of Photovoltaic System ("Solar Array") at Closed Landfill**

My office received a total of eight submissions from firms; following review, four were considered sufficient to interview. The four firms interviewed were Davis Hill Development, EcoSolar, Verogy, and CTEC Solar. Prior to discussion of the submissions received, I will provide context for the potential scenarios.

***Definitions***

The State of Connecticut currently allows for virtual net metering ("VNM"). In essence, a facility can generate power for supply to the grid, and sell the power on the open market. The market regulators require a sponsor of the facility; the sponsor can buy credits for the power generated, at a rate less than the actual value of the credits. The City recently sponsored a facility on private property in Bristol to be operated by SunJet; due to the City's sponsorship of the site, the City's electric bill will be reduced by the value of credits issued by Eversource, and the City will pay SunJet for having the credits assigned to it, at an amount considerably less than the credits. This is expected to provide an overall reduction in Bristol's electricity cost in an amount of roughly $5M over the course of a twenty year agreement. Under this program, Bristol is not buying electricity from SunJet, and still buys electricity on the open market for the full value of the energy it uses. Bristol is simply taking the credits for the green energy introduced into the grid.

There is a new program called Shared Clean Energy Facility ("SCEF"), under which the generation site would designate 40% of energy to low and moderate income households. The program is capable of designating the energy to residential pools (e.g. Bristol residents). The program also incentivizes use of challenging properties such as Brownfield sites. Despite its benefits, the program has not yet been successful in Connecticut. The regulatory bodies have established pricing structures for the implementation of such a program, and the rates are not

at a cost that is attractive to site developers. Additionally, there is confusion on who would manage eligibility of participants; it was originally planned that the site developer would be responsible for reviewing applications for individual households, and recently Eversource is in discussions toward taking on this burden. Due to these factors, the program was described as "falling apart" by some of the potential site developers.

The City can potentially engage in a simple lease for use of the land. Under such a scenario, a developer would simply pay for use of property, and Bristol would not be involved in any energy-related component of the site use, and would simply benefit from a revenue stream.

***Review of Submissions***

**Davis Hill Development**'s submission is actually a joint submission with Skyview Ventures. The generation capacity for their system 2.4MW DC, equivalent to 2.0MW AC. There are two scenarios proposed; the first is primarily a lease for the property, in an amount of $130,000 annually. The second involves the City purchasing credits for the energy created, under the virtual net metering program. The vendor stated that our better value would be to pursue the virtual net metering program.

They acknowledged that there are already 13 VNM projects in the pipeline; if/when the VNM application were accepted, they anticipate roughly 3 to 4 months of construction. Their maintenance of the property would focus primarily on the electrical components of the installation, but did leave open conversation for discussions on other aspects of maintenance (such as landscaping/mowing).

**EcoSolar**'s submission listed a generation capacity of 1.09MW DC, equivalent to 0.89MW AC. Their proposal listed, as its first option, pursuit of the SCEF program. If the program were pursued, Bristol's benefit would primarily be lease revenue. As a second option, they proposed application to the VNM program. Their staff did not seem to fully understand the VNM model, and stated that Bristol would be buying the energy and buying credits, with the credit purchases impacting our overall load profile for subsequent electricity purchases. Their proposed installation of panels involved placement of corrugated piping, filled with concrete, which seemed to be a significantly different way of anchoring equipment. Regarding maintenance of the equipment and the site, they simply made reference to manufacturer's equipment warranty.

**Verogy**'s submission was focused on pursuit of a SCEF proposal, within which it would pursue provision of energy to low and moderate income Bristol residents via the Bristol Housing Authority. 1.4MW DC, less than 1MW AC output. The deployment was intentionally designed to provide less than 1MW AC output, for the purposes of easier application process through regulatory agencies, specifically the CT Siting Council (this deployment is the smallest installation of the submissions).

Although none of the firms were asked for (or submitted) a development pro-forma, Verogy indicated that instead of a land lease, they were interested in development of payments via a PILOT program, with incentive tax credits for the system.

**CTEC Solar**'s submission was based on a 2.0MW DC / 1.66MW AC deployment, and involves a VNM model within which the City would buy the credits. As builders and not developers, they built, and own and operate, the facility at the International Skating Center of CT ("ISCC"), as well as other installations throughout CT. They also have experience with constructing solar arrays on closed landfills, with completion of a facility in Putnam as a recent model.

Of the four firms interviewed, they had the most detailed discussion on sequence of approvals as they relate to moving a project forward. For a virtual net metering project, the site designation is a critical first step, but also cited application for an interconnection permit; this permit can take a great deal of time to receive, but can be applied for without penalty as soon as the site is designated; application for this permit early on can lead to faster implementation, since permit receipt can take up to a year. The firm seemed to have the most in-depth familiarity with permits and processes.

***Conclusions and Recommendations***

Based on the review committee's findings, CTEC Solar appeared to be the best suited to build a facility that provides generation of a sufficient amount of energy that would be beneficial to Bristol, and provide the best economic incentive to develop the solar array.

At this point, there is not enough information to fully develop a contract; my office can pursue a development pro-forma to better understand the financials of the proposed project. Please know that without an understanding of the path for a system (e.g. virtual net metering, SCEF, or simple lease), no firm was capable of providing a pro-forma. Based on the designation of CTEC as the preferred developer, CTEC can now provide us with more financial information, to enable pursuit of a more formal arrangement. Once a proposal is more formally developed by CTEC that would be beneficial to Bristol, it would be appropriate to pursue the signing of a letter of intent with CTEC, to enable them to submit an application for virtual net metering for the site and to enable them to pursue interconnection permit. It is assumed that the Board of Public Works would be advised of the project status, and barring objection from the Board, City Council would be directly approached regarding the letter of intent (presumably in April 2020).

Please let me know if I can provide any further information regarding this project.